

Claims

1. A ceramics sintered body comprising boron nitride, titanium diboride, a calcium compound and titanium nitride and having a relative density of 92% or more, wherein the content of the calcium compound in terms of CaO is from 0.05 to 0.8% by weight, and a peak intensity by X-ray diffraction of the (200) plane derived from titanium nitride is from 0.06 to 0.15 relative to a peak intensity of the (002) plane of BN.

2. The ceramics sintered body according to claim 1, wherein a part or all of the titanium nitride exists in a grain boundary phase.

3. The ceramics sintered body according to claim 1 or 2, further containing aluminum nitride.

4. The ceramics sintered body according to claim 1, 2 or 3, wherein the boron nitride crystal contained in the ceramics sintered body has a C-axis lattice constant of 6.675 angstroms or less, and the ceramics sintered body has an oxygen amount of from 1 to 2% by weight.

5. The ceramics sintered body according to claim 1, having a total content of boron nitride and titanium diboride of 95% or more by weight.

6. The ceramics sintered body according to claim 3, having a total content of boron nitride, titanium diboride and aluminum nitride of 95% or more by weight.

7. An exothermic body for metal vapor deposition which is constituted by the ceramics sintered body according to any one of claims 1 to 6.

8. A method for producing a ceramics sintered body comprising sintering a mixed raw material powder containing a titanium diboride powder, a boron nitride powder, a calcium-based sintering aid and optionally an aluminum nitride powder, in a non-oxidative atmosphere at a temperature of 1800 to 2100°C, wherein the boron nitride powder has a C-axis lattice constant of a boron nitride crystal of 6.690 angstroms or less, a cumulative average diameter of 4 to 20 μm , a BET specific surface area of 25 to 70 m^2/g , and an oxygen amount of 1.0 to 2.5% by weight, and the mixed raw material powder contains a calcium-based sintering aid in an amount of from 0.09 to 0.8% by weight in terms of CaO.

9. The method for producing a ceramics sintered body according to claim 8, wherein the calcium-based sintering aid is at least one member selected from the group consisting of CaO , Ca(OH)_2 and CaCO_3 .